Amir Mohammad Kharazi

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in amir-mohammad-kharazi   ⯐ amkharazi

Research Interests

- ○ Machine Learning, Deep Learning, Data Mining, Computer Vision, Transformers
- ○ Tensor Decompositions, Matrix Factorizations, Multilinear learning
- ○ Complex Networks, Graph Neural Networks, Network Representation Learning
- ○ Computational Neuroscience, Cognitive Science

Education

Tarbiat Modares University (TMU)   *2022 – Present*
Master of Science (M.Sc.) in Computer Science

- ○ GPA: 4.0 / 4.0 (Ranked 1st in the department)
- ○ **Thesis:** Investigation of Tensor Methods in Vision Transformers

Amirkabir University of Technology (AUT)   *2017 – 2021*
Bachelor of Science (B.Sc.) in Computer Science

Research Experience

NMA - Impact Scholar Program   *2024 – 2025*
As part of the Neuromatch Academy Impact Scholar Program ↗, we conducted a comprehensive study comparing non-linear CEBRA and linear spatial filtering methods, evaluating their respective strengths and limitations when applied to ECoG data.

AI in Testing   *2024 – Present*
Led a pioneering team at Digipay ↗, developing test automation frameworks using Large Language Models (LLMs) and Computer Vision techniques for intelligent UI testing and interaction.

DeepTenLab   *2023 – Present*
Contributing member at DeepTenLab ↗, exploring tensor-based methods for computer vision and advanced neural architectures. Contributed to the development of modular PyTorch-based packages for layer-level substitution, enabling flexible experimentation beyond traditional architectures. Primary data modalities include images, but the work also extends to text, EEGs, and other types.

Teaching Experience

Computational Neuroscience   *Summer 2024*
Neuromatch Academy

Deep Learning   *Spring 2024*
Tarbiat Modares University

Machine Learning   *Fall 2023*
Tarbiat Modares University

Special Topics in Data Science   *Fall 2023*
Tarbiat Modares University

Data Mining   *Spring 2021*
Amirkabir University of Technology

Other Experience

Software Test Engineer *2024 – Present*
Digipay

As a Software Test Engineer at Digipay 🔗*, one of the leading fintech companies in the region, I worked in an Agile development environment alongside cross-functional teams to integrate AI into software testing pipelines. My responsibilities included both automated and manual testing using state-of-the-art methodologies, as well as contributing to the design and maintenance of CI/CD pipelines aligned with modern industry standards.*

Publications

[Under Review] **Hierarchical Local-Global Tensor Layer(HLGTL) in Deep Convolutional Neural Networks** 2025
Expert Systems With Applications

Mansoor Rezghi, ***Amir Mohammad Kharazi***, Mohammad Badzohreh

Skills

Programming: C, R, Bash, Matlab, Java, Python,

Data Science: PyTorch, TensorFlow, Keras, torch_geometric, SciPy, MNE, Numpy, Pandas,

Technologies: Swagger, Kibana, MySQL, PostgreSQL, MongoDB, Redis, Robotframework, Selenium,

Web: HTML, CSS, JavaScript, Flask

Operating System: GNU, Linux,

Others: Git, CUDA, LaTeX

Languages

Persian: Mother Tongue
English: Proficient (**IELTS:** Overall 7.5 – L: 9.0, R: 7.0, W: 6.5, S: 7.0)
German: Basic

Hobbies

Computer
I enjoy playing video games and creating mods for them. My favorite games include Minecraft, Skyrim, and Dota2 .
Sports
I am an avid swimmer and also enjoy hiking and late-night running.

References

Dr. Mansoor Rezghi (rezghi@modares.ac.ir 🔗)
Associate professor at TMU Department of Computer Science.

Dr. Ali Rajaei (alirajaei@modares.ac.ir 🔗)
Assistant professor at TMU Department of Computer Science.

Neuromatch Academy
Recommendation letters available upon request.